A.D. 1869, 14*th* AUGUST. N° 2429.

SPECIFICATION

OF

JAMES KENYON.

CONSUMING SMOKE IN FURNACES.

LONDON:

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25, SOUTHAMPTON BUILDINGS, HOLBORN.

1870.

A.D. 1869, 14*th* AUGUST. N° 2429.

Consuming Smoke in Furnaces.

(*This Invention received Provisional Protection only.*)

PROVISIONAL SPECIFICATION left by James Kenyon at the Office of the Commissioners of Patents, with his Petition, on the 14th August 1869.

I, JAMES KENYON, of Blackburn, in the County of Lancaster, Cotton Manufacturer, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN APPARATUS FOR CONSUMING SMOKE AND SAVING FUEL," to be as follows :—

My improvements are applicable to steam boiler and other furnaces of the ordinary construction having doors with air apertures, and the improved apparatus consists of a plate or plates placed in the boiler flue underneath the fire-bars, and on the inner end of the plate or plates is built the bridge; or a pipe can be used or any other suitable arrangement by which the air is heated and passed along the flue and brought in contact with the back part or end of the fire, or the air can be conducted into the flames through one or more perforated pipes placed over the fire. At the entrance of the air passage along which the heated air passes is fixed a small door, which is worked either by hand, or by the furnace door, or other machinery. There are also a number of bricks or heat

retainers (which may be made of clay or other suitable materials) placed in the boiler flue at suitable angles, and in the positions required for guiding the heated air to the flames. Among these bricks or heat retainers the heated air passes from the air conducter, which assists the bricks or heat retainers to consume the smoke, and as the heat retainers are made excessively hot when the furnace fire is good the heat which would otherwise have passed up the chimney is retained, and as the fire cools down previous to being replenished with fuel the heat retainers throw off the excessive heat they have retained, to be in readiness for another supply of heat when the fire is again replenished with fuel, thereby both consuming the smoke and saving fuel.

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